WHAT IS CLAIMED IS:

1. An apparatus for shaping at least one heat softened glass sheet comprising:

an upper mold comprising a full surface press face having a shaping surface generally contoured to the desired curvature of at least one preliminarily shaped glass sheet;

a support device to support the at least one glass sheet below the upper mold;

a shaping rail having an upper glass sheet supporting surface that supports selected peripheral portions of the at least one glass sheet, the sheet supporting surface having a profile generally corresponding to desired elevational contours of the selected peripheral portions of the at least one glass sheet and generally complimenting corresponding portions of the upper mold shaping surface;

a chamber positioned below the at least one glass sheet;

a moving device to move the upper mold and the shaping rail relative to each other so as to press at least a periphery of the at least one glass sheet against the upper mold shaping surface, and

a connector to direct pressurized gas into the chamber to urge at least central portions of the at least one glass sheet towards the upper mold press face.

2. The apparatus as in claim 1, wherein the support device comprises a lower mold comprising the shaping rail, a lower wall positioned below the shaping rail and sidewalls extending from the shaping rail to the lower wall forming the chamber, and a flexible heat resistant fabric extending between the shaping rails.

3. The apparatus as in claim 2, wherein the moving device comprises a lifting frame to move the lower mold between a first position, wherein the lower mold is spaced from the upper mold, and a second position, wherein the lower mold is adjacent the upper mold such that the selected peripheral portions of the at least one glass sheet are pressed between the shaping rail of the lower mold and the corresponding portions of the upper mold, and further wherein the connector directs pressurized gas into the chamber at least when the lower mold is in the second position to establish a static pressure within the chamber.

4. The apparatus as in claim 3, wherein the lower wall of the lower mold includes an inlet and gasket assembly, the lifting frame includes the connector, and the connector includes a collar configured to engage the gasket assembly when the lifting frame is in the second position.

5. The apparatus as in claim 3, further including an upper mold reciprocating device which moves the upper mold between a raised position, wherein the upper mold is spaced from the lower mold, and a lowered position, wherein the upper mold is adjacent the lower mold such that the selected peripheral portions of the at least one glass sheet are pressed between the shaping rail of the lower mold and the corresponding portions of the upper mold.

6. The apparatus as in claim 3, wherein the at least one glass sheet comprises a stacked pair of glass sheets.

7. The apparatus as in claim 1, wherein the support device is a heat resistant flexible carrier positioned on a support frame, the chamber includes the shaping rail, and the chamber is positioned below the flexible carrier.

8. The apparatus as in claim 7, wherein the moving device comprises a lifting frame to move the chamber upward against the flexible carrier such that the selected peripheral portions of the at least one glass sheet are pressed between the shaping rail of the chamber and the corresponding portions of the upper mold.

9. The apparatus as in claim 7, wherein the flexible carrier is a heat resistant, flexible conveying surface which supports the at least one glass sheet and allows the at least one glass sheet to sag downward to the preliminary shape.

10. The apparatus as in claim 7 wherein the flexible carrier comprises a heat resistant, flexible fabric suspended between generally horizontally extending support members to form a hammock arrangement, a plurality of posts to support the members and a pair of rails to support the posts.

11. The apparatus as in claim 1, wherein the upper mold, support device, and chamber are positioned within a heated enclosure.

12. The apparatus as in claim 11, further comprising a heated gas source to supply pressurized heated gas to the chamber.

13. The apparatus as in claim 12, wherein the heated gas source comprises at least one duct positioned within the heated enclosure.

14. The apparatus as in claim 2, wherein the fabric is selected from fiber glass cloth and stainless steel cloth and combinations thereof, and the sidewalls and lower walls are selected from sheet metal and heat resistant cloth and combinations thereof.

15. The apparatus as in claim 1, wherein the at least one glass sheet comprises a stacked pair of glass sheets.

16. The apparatus as in claim 1, wherein the upper mold is an upper vacuum mold.

17. The apparatus as in claim 1, further comprising an upper mold reciprocating device to move the upper mold between a raised position, wherein the upper mold is spaced from the lower mold, and a lowered position, wherein the upper mold is adjacent the lower mold and the selected peripheral portions of the at least one glass sheet are pressed between the upper mold and corresponding portions of the support device.

18. The apparatus as in claim 1, wherein the support device comprises a lower mold comprising the shaping rail and sidewalls extending downwardly from the shaping rail, and the moving device comprises a lifting frame to move the lower mold between a first position and a second position, the lifting frame having a lower wall, wherein when the lower mold is at the first position, the lower wall is spaced from lower edges of the sidewall of the lower mold and the lower mold is spaced from the upper mold, and when the lower mold is at the second position, the lower wall is positioned against the lower edges of the sidewall of the lower mold to form the chamber and the lower mold is adjacent the upper mold such that the selected peripheral portions of the at least one glass sheet are pressed between the shaping rail of the lower mold and the corresponding portions of the upper mold, and further wherein the connector directs pressurized gas into the chamber at least when the lower mold is in the second position to establish a static pressure within the chamber.

19. The apparatus as in claim 18, wherein the connector is secured to the lower wall.

20. A method of shaping at least one heat softened glass sheet comprising:

supporting at least one preliminarily shaped heat softened glass sheet at least about its periphery;

aligning the at least one sheet between an upper mold comprising a full surface press face having a shaping surface generally contoured to a desired curvature of the at least one glass sheet and lower shaping rails comprising an upper glass sheet supporting surface that supports selected peripheral portions of the at least one glass sheet, the sheet supporting surface having a profile generally corresponding to the desired elevational contours of the periphery of the at least one glass sheet and generally complementing corresponding portions of the upper mold;

moving the lower shaping rails and the upper mold relative to each other such that the selected peripheral portions of the at least one glass sheet are pressed between the lower shaping rails supporting surface and corresponding portions of the lower shaping surface of the upper mold;

positioning a chamber below the at least one glass sheet;

sealing the chamber; and

pressurizing the chamber to bias at least central portions of the sheet against the upper mold to shape the at least one glass sheet to the desired configuration.

21. The method as in claim 20, wherein supporting and aligning the at least one glass sheet comprises supporting the at least one glass sheet on a lower mold comprising the shaping rail, heating the at least one glass sheet while supported on the lower mold to a temperature wherein the selected peripheral portions of the at least one glass sheet sag into contact with the shaping rail, and aligning the lower mold below the upper mold, and moving comprises moving the upper and lower molds relative to each other such that the selected peripheral portions of the at least one glass sheet are pressed between the lower mold and corresponding portions of the upper mold.

22. The method as in claim 21, further comprising providing the lower mold with sidewalls extending downwardly from the shaping rails and a lower wall to form the chamber

and wherein moving the lower shaping rails and upper mold to press the selected portions of the at least one glass sheet therebetween generally seals the chamber.

23. The method as in claim 22, further comprising spanning between the shaping rails of the lower mold with an upper deformable member spanning to support at least central portions of the at least one glass sheet, and pressuring the chamber biases the at least central portions of the at least one sheet supported on the deformable member against the upper mold.

24. The method as in claim 22, wherein moving comprises moving at least the lower mold between a first position, wherein the at least one glass sheet is spaced from the upper mold, to a second position, wherein at least the selected peripheral portions of the at least one glass sheet are pressed against the upper mold.

25. The method as in claim 22, wherein moving comprises moving at least the upper mold between a raised position, wherein the upper mold is spaced from the at least one glass sheet, to a lower position, wherein at least the selected peripheral portions of the at least one glass sheet are pressed against the upper mold.

26. The method as in claim 22, further comprising supporting the lower mold on conveying rolls and lifting the lower mold off the conveying rolls before pressing the at least one glass sheet against the upper mold.

27. The method as in claim 21, further comprising providing the lower mold with sidewalls extending downwardly from the shaping rails and providing a lower wall movable between a first position, wherein the lower wall is spaced from lower edges of the sidewall of the lower mold, and a second position, wherein the lower wall contacts the lower edges of the sidewalls and forms the chamber, and further wherein moving the lower shaping rails and upper mold to press the selected portions of the at least one glass sheet therebetween generally seals the chamber.

28. The method as in claim 20, wherein the chamber includes the shaping rail.

29. The method as in claim 28, wherein the supporting and aligning comprise conveying the at least one glass sheet over a plurality of conveying rolls while heating the at

least one glass sheet to its heat softening temperature, transferring the heat softened glass sheet onto a heat resistant deformable fabric, wherein the glass sheet sags to a preliminary configuration, and conveying the glass sheet between the upper mold and the chamber, and moving comprises moving the chamber upward to contact the fabric and press the glass sheet against the upper mold and generally seals the chamber.

30. The method as in claim 28, wherein supporting and aligning comprises supporting the at least one glass sheet on a heat resistant flexible fabric supported on a conveying frame, moving the at least one sheet and support frame through a furnace to heat the at least glass sheet to its heat softenable temperature, wherein the at least one glass sheet sags by gravity to a preliminary configuration; and aligning the preliminarily shaped at least one glass sheet on the support frame between the upper mold and the chamber, and moving the chamber upward to contact the fabric and press the at least one glass sheet against the upper mold and generally seals the chamber.

31. The method as in claim 20, further comprising providing a static pressure within the chamber of no greater than 1.5 psi.